SUPRANOX 309MoL

OERLIKON

MMA Electrodes
Stainless and Heat resistant steels

SUPRANOX 309MoL is a rutile coated MMA electrode for joining ferritic to austenitic steels, dissimilar joining and for stainless cladding. The weld metal microstructure consists of austenite with ~15% delta-ferrite. Surfacing on unalloyed and low-alloy steels is already corrosion resistant in the first layer. Metal transfer is in fine droplets, good wetting of the joint faces, finely-rippled weld bead surface, easy slag removal with good striking and restriking. The maximum operating temperature for joints between dissimilar steels is 300 °C, for higher temperatures or postweld heat treatments use SUPRANEL 600.

Classification	
EN	1600: E 23 12 2 L R 1 2
AWS	A5.4: E 309LMo-17

Approvals	Grade
DNV	309Mo

CE

Chemical analysis (Typical values in %)

C	Mn	Si	Cr	Ni	Mo	Ferrite
≤ 0.030	0.8	0.9	22.5	13.5	2.6	12-20

All-weld metal Mechanical Properties

Heat Treatment	Yield Strength (MPa)	Tensile Strength (MPa)	Elongation A5 (%)	Impact Energy ISO - V (J)	
				+20 °C	-60 °C
As Welded	≥ 350	≥ 550	≥ 25	≥ 50	≥ 32

Materials

Dissimilar steels (Ferritic to Austenitic steels), cladding.

Storage

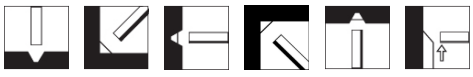
Keep dry and avoid condensation.

Re-drying not generally required

If necessary: 300-350 °C for 2 hours, 5 times max

Current condition and welding position

AC; DC+



PA PB PC PD PE PF

Packaging data

Diam. (mm)	Length (mm)	Current (A)	Approx. weight (kg/1000)	CBOX		DRYF		VPMD	
				PC	Code	PC	Code	PC	Code
2.5	300	60-85	18.9	195	●	28	●	90	●
3.2	350	80-105	37.1	115	●	22	●	50	●
4.0	350	100-135	54.6	80	●	18	●	35	●
5.0	450	160-220	113.0	40	●	7	●	20	●